

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :

REPKE, et al.

Group Art Unit: TBA

Serial No.: TBA

Examiner: TBA

Filed: Herewith

For: PROTEIN HAVING MULTIPLE ANTIGEN/EPITOPE SEQUENCES AND BEING  
IMMOBILIZED

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to initial examination, please amend the above-identified application as follows:

**IN THE CLAIMS:**

*Please amend the claims as follows:*

4. (Amended) A protein according to claim 1, wherein the bridge composition comprises positively charged binding sites for the binding to a negatively charged solid phase, preferably a membrane.
5. (Amended) A protein according to claim 1, wherein the antigen/epitope sequences binding different antibodies.
6. (Amended) A protein according to claim 1, wherein the antigen/epitope sequences are repetitive sequence elements of identical or different HIV sub-types.
7. (Amended) A protein according to claim 1, wherein the antigen/epitope sequences are sequences of different HIV genes and/or strains and/or sub-types.
8. (Amended) A protein according to claim 1, wherein the antigen/epitope sequences are

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sequences of a single HIV sub-type.

9. (Amended) A protein according to claim 1, wherein the bridge composition is a sequence element of gp120.

10. (Amended) A protein according to claim 1, wherein partial sequences unspecifically binding to antibodies contained in blood are deleted.

11. (Amended) The application of a protein according to claim 1 for the production of an immobilizate for the detection of antibodies, wherein first the protein is produced in a dissolved manner, then the protein is bound by at least one binding site to a solid phase, and as an option the solid phase with the protein bound thereto is subjected to at least one rinsing step and/or blocking step.

12. (Amended) The application of a protein according to claim 1 for performing a HIV test, wherein an immobilizate is produced and said immobilizate is placed in a housing, and wherein a detector solution is brought-in in a reaction zone of the immobilizate or is separately added for application to the immobilizate.

13. (Amended) A polynucleotide, in particular cDNA, coding for a protein according to claim 1.

14. (Amended) An expression vector, preferably plasmide, containing a polynucleotide sequence coding for a protein according to claim 1.

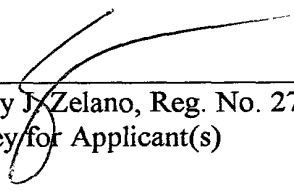
16. (Amended) A method for the production of a protein according to claim 1, wherein the antigen/epitope sequences and the bridge sequences are selected and the order of the lining-up is defined and DNA coding for the antigen/epitope sequences and for the bridge sequences is subsequently inserted into an expression vector in the defined manner, a cell, preferably E. coli, being transformed by means of the expression vector and transformed cells being selected and cultivated, and wherein the protein expressed from the selected cells is isolated.

**REMARKS**

The amendments to the claims have been made to simply remove the multiple dependencies therein.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

  
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Anthony J. Zelano, Reg. No. 27,969  
Attorney for Applicant(s)

MILLEN, WHITE, ZELANO  
& BRANIGAN, P.C.  
Arlington Courthouse Plaza 1, Suite 1400  
2200 Clarendon Boulevard  
Arlington, Virginia 22201  
Telephone: (703) 243-6333  
Facsimile: (703) 243-6410

Attorney Docket No.: ALBRE-22

Date: January 31, 2002

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

*Please amend the claims as follows:*

4. (Amended) A protein according to [one of the claims 1 to 3] claim 1, wherein the bridge composition comprises positively charged binding sites for the binding to a negatively charged solid phase, preferably a membrane.
5. (Amended) A protein according to [one of claims 1 to 4] claim 1, wherein the antigen/epitope sequences binding different antibodies.
6. (Amended) A protein according to [one of claims 1 to 5] claim 1, wherein the antigen/epitope sequences are repetitive sequence elements of identical or different HIV sub-types.
7. (Amended) A protein according to [one of claims 1 to 5] claim 1, wherein the antigen/epitope sequences are sequences of different HIV genes and/or strains and/or sub-types .
8. (Amended) A protein according to [one of claims 1 to 5] claim 1, wherein the antigen/epitope sequences are sequences of a single HIV sub-type.
9. (Amended) A protein according to [one of claims 1 to 8] claim 1, wherein the bridge composition is a sequence element of gp120.
10. (Amended) A protein according to [one of claims 1 to 9] claim 1, wherein partial sequences unspecifically binding to antibodies contained in blood are deleted.
11. (Amended) The application of a protein according to [one of claims 1 to 10] claim 1 for the production of an immobilizate for the detection of antibodies, wherein first the protein is produced in a dissolved manner, then the protein is bound by at least one binding site to a solid phase, and as an option the solid phase with the protein bound thereto is subjected to at least one rinsing step and/or blocking step.

12. (Amended) The application of a protein according to [one of claims 1 to 10] claim 1 for performing a HIV test, wherein an immobilizate [according to claim 11] is produced and said immobilizate is placed in a housing, and wherein a detector solution is brought-in in a reaction zone of the immobilizate or is separately added for application to the immobilizate.

13. (Amended) A polynucleotide, in particular cDNA, coding for a protein according to [one of claims 1 to 10] claim 1.

14. (Amended) An expression vector, preferably plasmide, containing a polynucleotide sequence coding for a protein according to [one of claims 1 to 10] claim 1.

16. (Amended) A method for the production of a protein according to [one of claims 1 to 10] claim 1, wherein the antigen/epitope sequences and the bridge sequences are selected and the order of the lining-up is defined and DNA coding for the antigen/epitope sequences and for the bridge sequences is subsequently inserted into an expression vector in the defined manner, a cell, preferably E. coli, being transformed by means of the expression vector and transformed cells being selected and cultivated, and wherein the protein expressed from the selected cells is isolated.